ARMY MATERIEL COMMAND

Tactical Wheeled Vehicle Conference
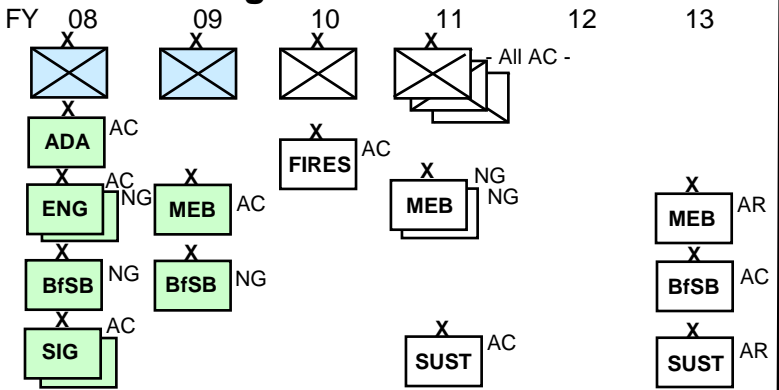
LTG James Pillsbury
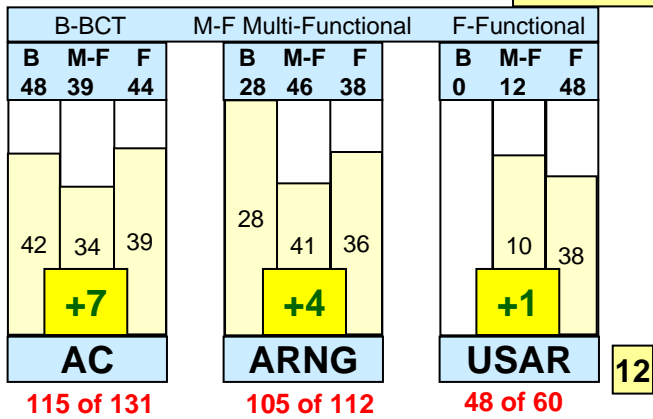
Growth: 21 Brigades

FY 08 09 10 11 12 13
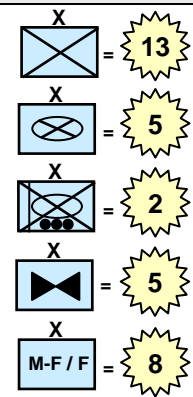
ADA — AC
ENG — AC / NG
MEB — AC
FIRES — AC
MEB — NG / NG
MEB — AR
BfSB — NG
BfSB — NG
BfSB — AC
SIG — AC
SUST — AC
SUST — AR

- All AC -

Modular Conversion - EDATES

268/303

B-BCT			M-F Multi-Functional			F-Functional		
B	M-F	F	B	M-F	F	B	M-F	F
48	39	44	28	46	38	0	12	48
42	34	39	28	41	36		10	38
+7			**+4**			**+1**		
AC			**ARNG**			**USAR**		
115 of 131			105 of 112			48 of 60		

12

Unit reset

X	= 13
X (⊗)	= 5
X (⊗•••)	= 2
X (▶◀)	= 5
X M-F / F	= 8

M-F / F
BCT Brigades Total
20 + **13** = **33**

BDE/DIV (FY09)

DIV HQ Hood to Carson
Hood to Carson
DIV HQ Reconstitute — 1
TT Remission/ Reconstitute — 1

CCMRF

- 09-1 AC (green)
- 10-2 RC
- 11-3 RC
- 12-2 RC

APS

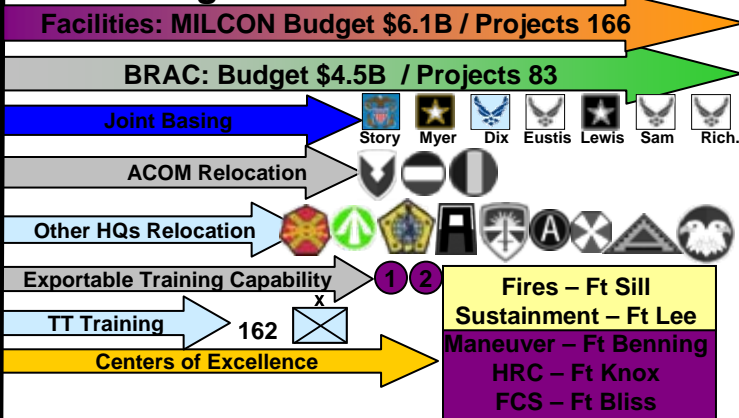| APS 1 | APS 2 | APS 3 | APS 4 | APS 5 | | PTDO |

FCS:
- **CMETL doctrine, organization, & training development**
- **AETF continues to build capability: IBCT, Fires, & SUS**
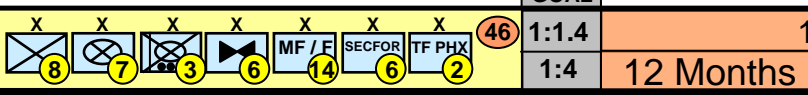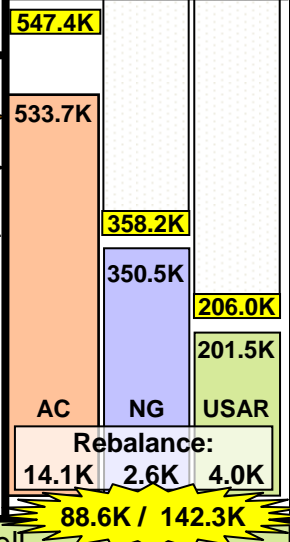- **Test: Spin Out, Rifleman's Radio, & NLOS-LS**

FY 08 09 10 11 12 13

2 / 4 / 7 / 14+
FCS CORE Delivery/Fielding

FCS CORE Development TNG

5 — X(-) / II SUS — TBD — X

Evolution: AETF to FBCT

Spin Out Test/Eval — **Spin Out Fielding**

X +1 / X +2 (3) / X +4 (7)

ASCC

XXXX XXXX XXXX XXXX XXXX — Title X

XXXX XX — EUCOM AFRICOM / SETAF

Generating Force

Facilities: MILCON Budget $6.1B / Projects 166

BRAC: Budget $4.5B / Projects 83

Joint Basing — Story, Myer, Dix, Eustis, Lewis, Sam, Rich.

ACOM Relocation

Other HQs Relocation

Exportable Training Capability — 1 2

TT Training — 162 — X

Centers of Excellence

**Fires – Ft Sill
Sustainment – Ft Lee
Maneuver – Ft Benning
HRC – Ft Knox
FCS – Ft Bliss**

Personnel

547.4K

533.7K

358.2K
350.5K

206.0K
201.5K

AC	NG	USAR
	Rebalance:	
14.1K	2.6K	4.0K

88.6K / 142.3K

X 8 / X ⊗ 7 / X 3 / X ▶◀ 6 / MF/F 14 / SECFOR 6 / TF PHX 2

46

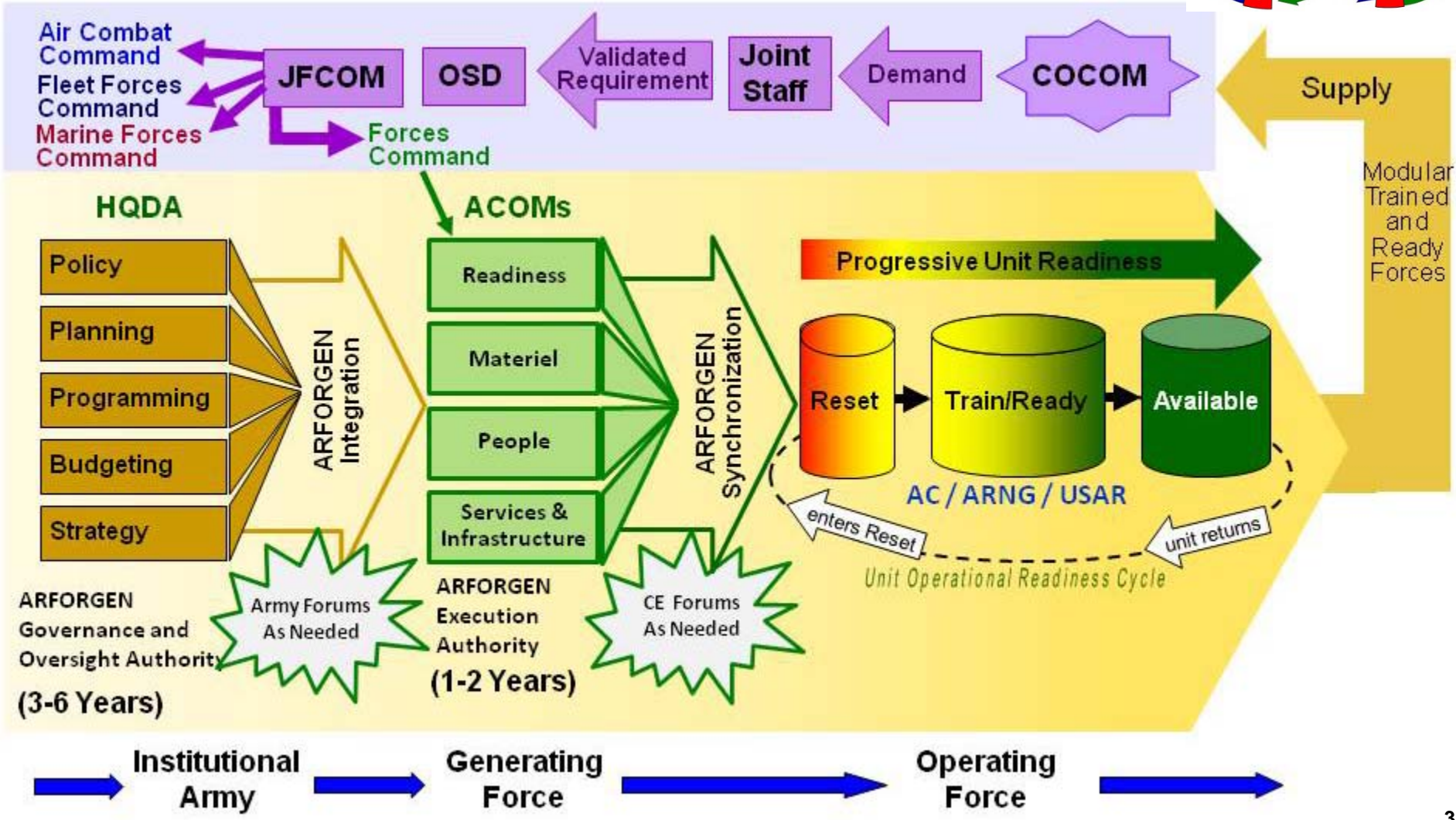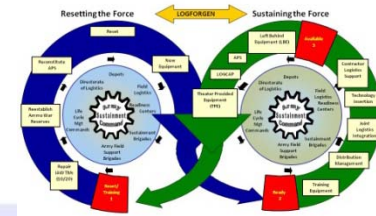|	GOAL	
1:1.4	12 Months BOG	16.8 Months Dwell
1:4	12 Months MOB	48 Months Dwell

ARFORGEN Tomorrow – The Model

Setting the Force

What We've Done . . . What We're Doing

ARMY PLAN
The Army will undertake a disciplined, orderly reconstitution to restore combat power.

96,000+ Small Arms FY08 *

Small Arms
(201,570 Overhauled / 421,564 SARET)

2,000+ Tracked* FY08

4,027 Tracks
*39,658 Wheels**
(Includes Reset & Recap)*

12,000+ Wheeled FY08

410+ Aircraft FY08

2,905 Aircraft Scheduled*
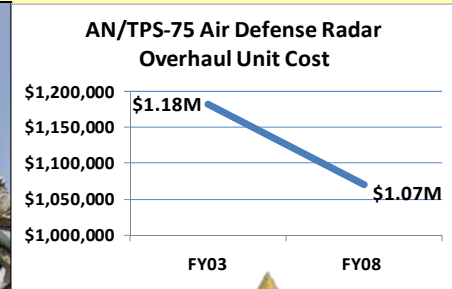*2,473* Completed*
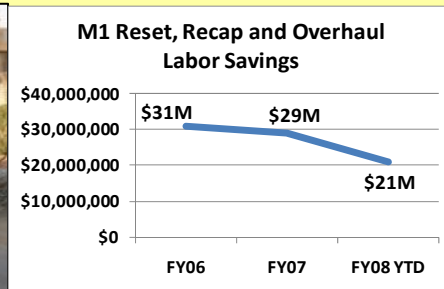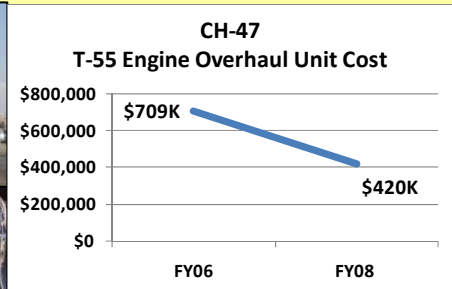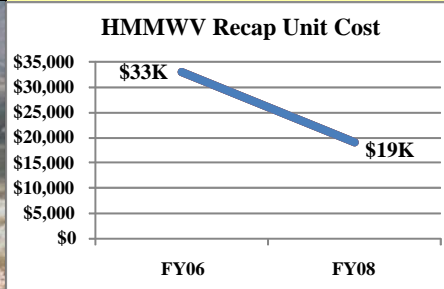
3,200+ Generators FY08

CEERT
NVDs 44,201;
SINCGARS 34,079
Overhaul Totals
19,256 Generators
24,372 Commo / Electric
105,414 COMSEC

11,000+ Missiles FY08

12,879 Missile Systems
15,032 Missile Rounds Reset
13.3K Short Tons Ammunition
Processed for Reissue in SWA

FY08 Projections (2/15/08)

*** - As of 1/08 Includes Depot On-Site Teams*

Leaning Our Business Processes

$50M Annual Savings
Letterkenny Army Depot

HMMWV Recap Unit Cost

- $33K (FY06)
- $19K (FY08)

$26M Annual Savings
Corpus Christi Army Depot

CH-47 T-55 Engine Overhaul Unit Cost

- $709K (FY06)
- $420K (FY08)

$81M FY06-08 Savings
Anniston Army Depot

M1 Reset, Recap and Overhaul Labor Savings

- $31M (FY06)
- $29M (FY07)
- $21M (FY08 YTD)

$1.7M Annual Savings
Tobyhanna Army Depot

AN/TPS-75 Air Defense Radar Overhaul Unit Cost

- $1.18M (FY03)
- $1.07M (FY08)

Malcolm Baldrige Quality Award
23 Shingo Awards

Master Black Belt	36
Black Belt	656
Green Belt	3,497

Corporate America Seeking Best Business Practices

LSS Benefits
FY08 $310M
FY07 $305M
FY06 $247M
FY05 $110M

Our Performance Now is Equal or Better than Industry Partners

Business Transformation

Lower Cost …Higher Quality…Faster Delivery!

2008 SHINGO PRIZE RECIPIENTS

Silver

- Red River Army Depot Heavy Expanded Mobility Tactical Truck (HEMTT)

Bronze

- Tobyhanna Army Depot AN/TYQ-23 Tactical Air Operations Module
- Red River Army Depot Trailers
- Letterkenny Army Depot Biological Integrated Detection System (BIDS)
- Red River Army Depot Patriot Missile
- Tobyhanna Army Depot AN/ASM-189 Electronic Maintenance Shop Van

LSS Financial Benefits
FY08 $310M
FY07 $305M
FY06 $247M
FY05 $110M

2007 Baldrige Quality Award
US Army Armament Research,
Development & Engineering Center

NIST
National Institute of
Standards and Technology

Shingo Prize Recipients - Public Sector :	
2005 –AMC 1	*Total 5*
2006 –AMC 4	Total 9
2007 –AMC 12	Total 17
2008 – AMC 6	Total 11

Improvement Based on Industry Standards

ISO International Organization for Standardization

Master Black Belts 36
Black Belts 656
Green Belts 3497

ISO Certifications

ISO 9001:2000 Quality Management System (23 sites)	ISO 14001:2000 Environmental Management System (9 sites)	ISO 9001:2000 + AS9100B Aviation Maintenance System (1 site)	AS 9110 2003-01 International Aerospace Quality Systems Standards (1 site)	OHSAS 18001 Occupational Health and Safety Administration System (1 site)
		VPP		

Safety Voluntary Protection Program (VPP) (2 sites)

Condition-Based Maintenance (CBM)

- **Prognostic, not diagnostic**

  - **Fix only what needs to be fixed before it fails**
  - **Continuously refine from what we learn to be more predictive, more accurate**

- **Successes in aviation and missile fleets**

  - **Increased aircraft availability, flight hours**
  - **Reduced sustainment costs (60% for Hellfire)**

- **Way ahead**

  - **Ground combat systems**
  - **Wheeled vehicle fleets**
  - **C4ISR systems**

# AMSAA Tactical Wheeled Vehicle

CBM Effort

Records Conditions essential to prognostic development

Capable of Identifying Health/Impending Failures

Records Fuel Consumption, speed profiles, vibrations, & other parameters by bumper number

Unit receives monthly feedback reports compiled from recorded conditions and maintenance

Data collected from instrumentation package & sent to AMSAA for analysis & feedback
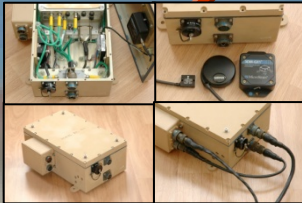
AMSAA
- **Warfighter**
- **PMs**
- **TARDEC**
- **ARL**
- **ATEC**
- **CASCOM**
- **Academia**
- **etc.**

**Asset Monitoring Tool**
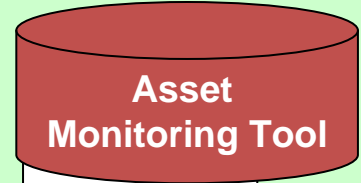
Usage

Maintenance

Conditions

Algorithm Development

As of Dec 08, AMSAA CBM Instrumentation Packages in OIF/OEF, CONUS, Alaska, & Korea

Vehicle Type	Quantity
M1151 HMMWV	3
IMG MRAP	3
CAIMAN MRAP	10
Buffalo MRAP	2
RG-33 MRAP	3
RG-31 MRAP	4
M916A3	6
M915	3
M1070A1 HETs	3
M984A2 HEMTTs	4
M1075 HEMTT PLS	3
LMTV/MTV	9
Strykers	9

Speed Profiles

Engine Load

Fuel Economy

Maximum Sustained Currents for Length of Time
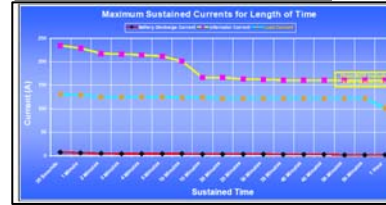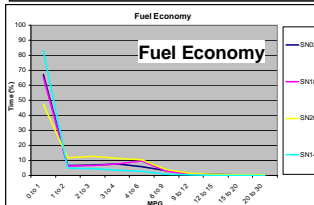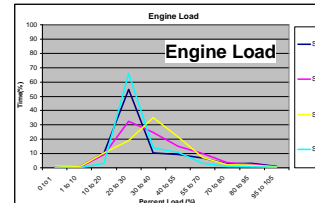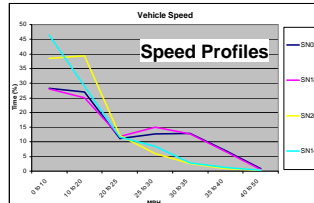
Condition-Based Maintenance Plus (CBM+)

PREVENTIVE — **INDICATORS** — **DIAGNOSTICS** — **PROGNOSTICS** — **ON-CONDITION**

- **Reactive Maintenance**
- **Time Based Inspection/Overhaul**

- **Sensor Installation**
- **Knowledge Development**
- **Fault Diagnosis**
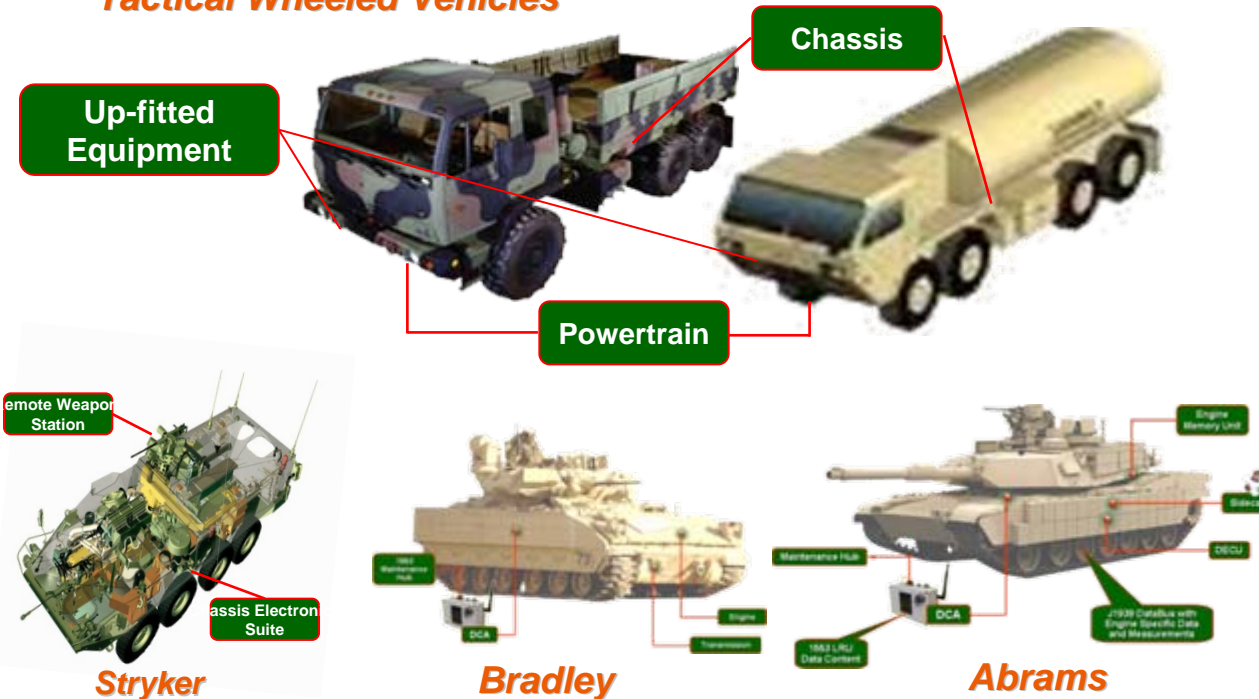- **Remaining Component Useful Life**
- **Inspection Targeting**

- **Proactive Maintenance**
- **Proactive Supply transactions**

Maintenance capabilities derived from near real-time assessment and analysis of data from embedded sensors and platform's history

Tactical Wheeled Vehicles

Chassis

Up-fitted Equipment

Powertrain

Remote Weapon Station

Chassis Electron Suite

Stryker

Bradley

Maintenance Hub

DCA

Engine

Transmission

Abrams

Engine Memory Unit

Sidecar

DECU

Maintenance Hub

DCA

1553 LRU/ Data Content

J1939 DataBus with Engine Specific Data and Measurements

CBM+ Goals:

- **Increase Platform Availability and Readiness**
- **Reduce Operations & Support (O&S) Costs**

Key CBM+ Enablers

- **Health Management**
  - ✓ **Embedded Sensors**
  - ✓ **Diagnostics**
  - ✓ **Prognostics**
- **Maintenance Aids (MSD, PMA)**
- **IETMs**
- **Digital Logbooks**
- **Data Storage**
- **Data Networks**

Adopting an Enterprise Approach

- What We Are:

  ✓ Increasing collaboration at all levels of AMC and ASA(ALT) incorporating lessons learned from four years of operating as LCMCs

  ✓ Exploring all ways to improve effectiveness and efficiency to:
    ➤ Reduce costs wherever possible
    ➤ Improve support to the Warfighter
    ➤ Grow the Army during continuous Reset

  ✓ Improve reliability of systems to reduce life cycle costs

  ✓ Improve transparency

  ✓ Provide the Army's Senior Leadership with the right information in a timely manner to make the best decisions at the appropriate level

- We Are Not:

  ✓ Changing the command structure

  ✓ Modifying duties and responsibilities assigned by law or regulation

SA/CSA Imperatives

Sustain
Prepare
RESET
Transform

2011 - A Balanced Force

Current and Future Demands

Readiness + Strategic Flexibility Sustain Volunteer Force

The Preeminent Global Materiel Enterprise Manager

ACQUIRE
RESEARCH & DEVELOP
EQUIP   TEST
DISTRIBUTE   SUPPLY   MAINTAIN
SUSTAIN   DISPOSE

VISION

AMC Tomorrow Huntsville

Institutionalized RESET
RESET 100% BCTs

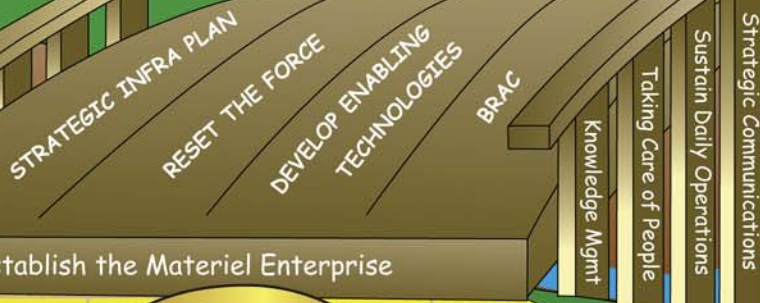A Responsive Adaptive Acquisition Process

Completed BRAC

Right-sized
Depots | MCA
Arsenals | CIP
Ammo

Become the Materiel Enterprise

Modernize and Equip the Force

Challenges
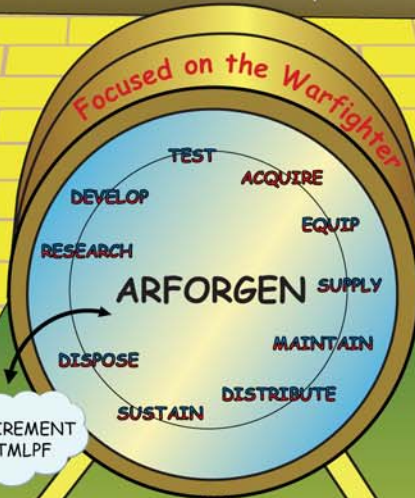• Persistent Conflict
• Aged Infrastructure

STRATEGIC INFRA PLAN
RESET THE FORCE
DEVELOP ENABLING TECHNOLOGIES
BRAC

Knowledge Mgmt
Taking Care of People
Sustain Daily Operations
Strategic Communications

Opportunities
• Optimize Resources
• Governance
• BRAC
• New Administration

CURRENT

Current Demands

Readiness + Strategic Flexibility Sustain Volunteer Force

Establish the Materiel Enterprise

AMC
LCMCs
RDECOM/USASAC/ACC
SDDC
CMA/ACWA
ASC
DEPOTS/ARSENALS /AMMO PLANTS

Focused on the Warfighter

TEST
DEVELOP   ACQUIRE
EQUIP
RESEARCH
ARFORGEN   SUPPLY
DISPOSE   MAINTAIN
DISTRIBUTE
SUSTAIN

REQUIREMENT DOTMLPF

ASA(ALT)
ATEC
PEOs/PMs
INDUSTRY

Version 2.0

The Army Enterprise

- ✓ **Align functions and fiscal authorities**

- ✓ **Improve ARFORGEN**

- ✓ **Incentivize good stewardship**

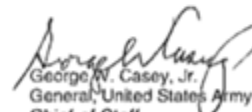- ✓ **Responsive and realistic requirements process**

DEPARTMENT OF THE ARMY
WASHINGTON DC 20310-0200

15 JAN 2009

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Institutional Adaptation and Army Transformation

1. The Army has made a deliberate effort, over time, to improve how it functions as an organization. Secretary White and General Shinseki provided the intellectual framework for the 21st Century Army and initiated our transformation from a Cold War Army to a campaign quality expeditionary force, capable of meeting the needs of the combatant commanders across the spectrum of conflict. Secretary Harvey and General Schoomaker led the next phase, focusing on modularity and organizational change. We will continue our transformation by adapting our institutions to support an Army on a rotational cycle in an era of persistent conflict. We will not cement the hard-won changes of the past decade until this occurs.

2. There are three major elements to Institutional Adaptation. First, the Army will improve how we execute ARFORGEN by revising the model for institutional support of the ARFORGEN process. Second, the Army will adopt an enterprise approach, by developing an Army-wide strategic management system that incorporates a refined governance process supported by an improved assessment architecture. Third, the Army will reform its requirements and resource processes by establishing a more responsive and realistic requirements process and inculcating a cost culture that incentivizes good stewardship. The confluence of these three efforts is designed to improve both the effectiveness and efficiency of the Army and align our institutions to support the Army of the 21st Century and preserve our All Volunteer Force.

3. The ability to manage as an enterprise is critical to restoring balance. The Army will establish the Army Enterprise Board (AEB), with representation from the Secretariat and Army Commands, that meets routinely. The AEB will review strategic Army issues and recommend solutions to the Secretary of the Army. The board will supervise our functional alignment into core enterprises in accordance with Title 10, General Orders No. 3, and Army Regulations on a schedule that will not impact current operations. The AEB Charter and the implementing instructions will be developed and published over the course of this year with a goal of IOC of March 2009 and FOC of August 2009.

4. Institutional Adaptation is the final and essential element of our transformation from a Cold War force to an agile, disciplined warrior team that is dominant across the spectrum of 21st Century conflict. We need your full support.

George W. Casey, Jr.
General, United States Army
Chief of Staff

Pete Geren
Secretary of the Army

Opportunities and Challenges

- **Era of persistent conflict is a fact of life**

- **Materiel Enterprise approach gaining momentum**
  - ➤ **AMC taking the lead on CSA's imperatives – RESET**
  - ➤ **Robust collaboration with our partners**

- **New administration: uncertainty of defense budget levels going forward**
  - ➤ **Support the Warfighter through good stewardship of every dollar**

- **Sustain our Industrial Base**
  - ➤ **Key role in revitalizing aging infrastructure**
  - ➤ **Retain and advance workforce skill sets and productivity**